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IS 10140 (1982): Bandsaw Blades for Woodworking [PGD 32: Cutting tools]



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“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

SPECIFICATION FOR BANDSAW BLADES FOR WOODWORKING

1. Scope — Covers terminology, dimensions and requirements for narrow and wide bandsaw blades for woodworking.

2. Types

2.1 Narrow Bandsaw Blades — The bandsaws with width between 6.3 and 63.0 mm, and thickness between 0.5 and 0.9 mm.

2.2 Wide Bandsaw Blades — The bandsaws with width between 50.0 and 200.0 mm, and thickness between 1.0 and 1.5 mm.

3. Terminology — For the purpose of this standard, the terminology, indicated in Fig. 1 along with the following definitions shall apply.

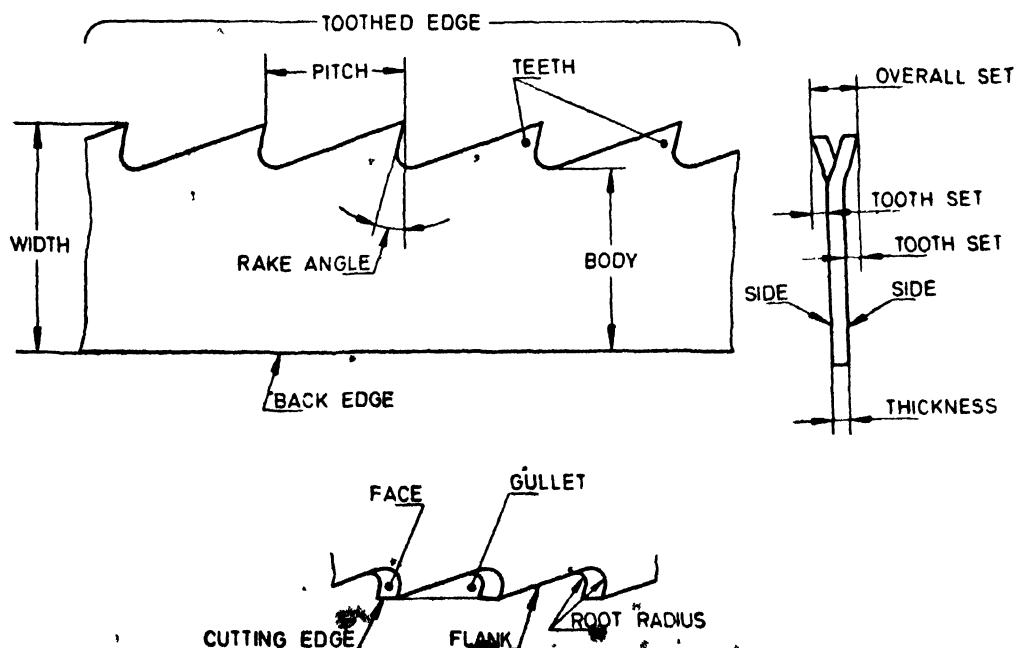


FIG. 1 TERMS RELATING TO WOODWORKING BANDSAW BLADES

3.1 Back Edge — The longitudinal edge parallel to the toothed edge.

3.2 Body — The part of the blade between the bottom of the gullet and the back edge.

3.3 Cutting Edge — The edge of the tooth which is intended to perform cutting. It is formed by the intersection of the flank and the face.

3.4 Face — The surface of the tooth over which the chip is removed.

3.5 Flank — The surface over which the surfaces produced on the workpiece pass. It extends to the root radius.

3.6 Gullet — The space bounded by the face, root radius and flank of a tooth which permits chip removal.

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NEW DELHI 110002

Small Tools Sectional Committee, EDC 45, Saw Blades Subcommittee, EDC 45.6 [Ref: Doc: EDC 45 (3345)]

3.7 Overall Set — The total thickness of the blade between two opposite teeth taking into account the tooth set on either side of the blade, which determines the overall width of cut.

3.8 Pitch — The distance between the apexes of adjacent teeth.

3.9 Rake Angle — The angle between face and the reference plane of the assumed non-set tooth.

3.10 Root Radius — The radius connecting the face of one tooth and the flank of the preceding one.

3.11 Side — The flat surface between the toothed edge and the back edge.

3.12 Teeth — The serrations formed across the thickness of the blade to provide the cutting edges.

3.13 Tooth Set — The projection of the teeth from the side of the blade to provide cutting clearance.

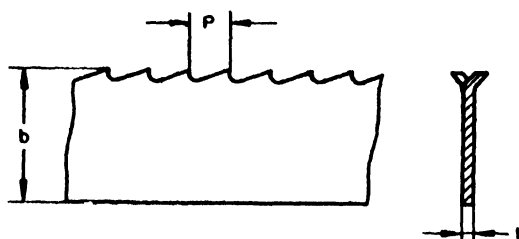
3.14 Toothed Edge — The longitudinal edge along which the teeth have been formed.

3.15 Thickness — The distance between the point of the tooth and the back edge.

3.16 Width — The overall distance between the point of the tooth and the back edge.

4. Dimensions

4.1 Dimensions of Narrow Bandsaw Blades for Woodworking



All dimensions in millimetres.

Width b	Thickness t	Pitch P	Thickness t	Pitch P	Thickness t	Pitch P
6.3	(0.4)	(3.2)	0.5	4	(0.6)	(5)
10	(0.4)	(4)	0.5	6.3	(0.6)	(6.3)
12.5	—	—	(0.5)	(6.3)	0.6	6.3
16	—	—	(0.5)	(6.3)	0.6	6.3
20	—	—	(0.5)	(6.3)	0.7	8
25	—	—	(0.5)	(6.3)	0.7	8
(30)	—	—	—	—	0.7	10
32	—	—	—	—	0.7	10
(35)	—	—	—	—	0.7	10
40	—	—	—	—	0.8	10
(45)	—	—	—	—	0.8	10
50	—	—	—	—	0.9	12.5
63	—	—	—	—	0.9	12.5

Note — Non-preferred dimensions are given within brackets.



AMENDMENT NO. 1 JANUARY 1987

TO

IS:10140-1982 SPECIFICATION FOR BANDSAW
BLADES FOR WOODWORKING

(Page 3, clause 5) - Substitute the following
for the existing clause:

'5. Material - The low alloy cold rolled steel strips
in hardened, tempered and polished condition having
the following composition:

For Narrow Bandsaws:

Carbon	-	0.7 percent, <i>Min</i>
Sulphur	-	0.04 percent, <i>Max</i>
Phosphorus	-	0.04 percent, <i>Max</i>
Chromium	-	0.1 to 0.4 percent
Nickel	-	0.4 to 0.7 percent

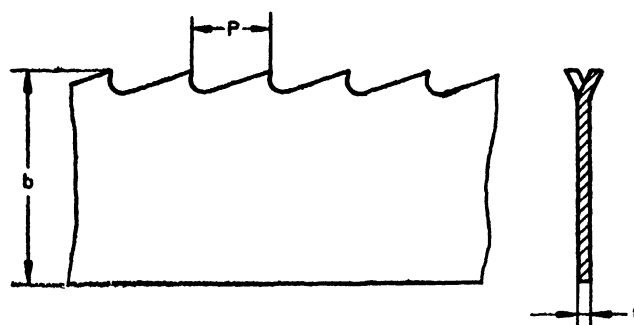
For Wide Bandsaws:

Carbon	-	0.7 percent, <i>Min</i>
Sulphur	-	0.02 percent, <i>Max</i>
Phosphorus	-	0.02 percent, <i>Max</i>
Chromium	-	0.15 percent, <i>Max</i>
Nickel	-	1.8 to 2.5 percent

(ISC 45)

Reprography Unit, ISI, New Delhi, India

4.2 Dimensions of Wide Bandsaw Blades for Woodworking



All dimensions in millimetres.

Width b	Thickness t	Pitch P
50	1.0	12.5
63	1.0	12.5
80	1.0	25.0
100	1.0	20.0, 25.0
125	1.25	25.0, 32.0
160	1.25	32.0, 40.0
200	1.50	40.0, 45.0

4.3 Tolerances — The tolerances for different dimensions of bandsaw blades for woodworking shall be as given below:

Dimension	Tolerance mm
Width b	± 0.50
Pitch P	± 0.10
Thickness t	+0.00 -0.03

5. Material — The low alloy cold rolled steel strips in hardened, tempered and polished condition having the following composition:

Carbon	— 0.8 to 0.9 percent
Silicon	— 0.25 to 0.35 percent
Manganese	— 0.35 to 0.5 percent
Chromium	— 0.35 to 0.5 percent
Nickel	— 0.4 to 0.5 percent
Sulphur and Phosphorus	— 0.03 percent, <i>Max</i>

6. Hardness — 410 HV *Min*
450 HV *Max*

7. Designation

7.1 A narrow bandsaw blade for woodworking having width 25 mm, thickness 0.7 mm, pitch 8.0 mm, made of low alloy steel and conforming to this standard shall be designated as:

Narrow Bandsaw Blade 25 × 0.7 × 8.0 IS : 10140

7.2 A wide bandsaw blade for woodworking having width 100 mm, pitch 20.0 mm made of low alloy steel and conforming to this standard shall be designated as:

Wide Bandsaw Blade 100 × 20.0 IS : 10140

8. General Requirements

8.1 Tooth Shape — The tooth shape shall be with 56° gullet angle and 10° rake angle, unless otherwise specified.

8.2 Tooth Setting — The provision of the rake setting of the tooth shall be at the discretion of the manufacturer. Unless otherwise specified, the bandsaws shall be supplied without setting.

9. Packing

9.1 Unless otherwise specified, packing shall be done in rolls of 100 metres.

9.2 Endless coil may be supplied by the manufacturer as per customers' requirement

10. Marking

10.1 The bandsaw blades shall be marked with the size and manufacturer's name and trade-mark at equispaced intervals over the bands.

10.2 ISI Certification Marking — Details available with the Indian Standards Institution.

EXPLANATORY NOTE

In the preparation of this standard considerable assistance has been derived from ISO 3295-1975 'Narrow bandsaw blades for woodworking dimensions' issued by International Organization for Standardization.